

IMPROVING TREATMENT COMPLETION FOR LATENT TUBERCULOSIS INFECTION AMONG HEALTH CARE WORKERS

CHARLES P. FELTON

NATIONAL
TUBERCULOSIS
CENTER



AT HARLEM HOSPITAL

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ABBREVIATIONS

BCG	bacille Calmette-Guérin vaccine
CDC	Centers for Disease Control and Prevention
EHS	Employee Health Services
HCW	health care worker
HIV	human immunodeficiency virus
INH	isoniazid
MD	medical doctor
RIF	rifampin
TB	tuberculosis
TST	tuberculin skin test

INTRODUCTION

Completion of treatment for latent tuberculosis infection is emerging as a major component of the tuberculosis (TB) control program in the United States. Health Care Workers (HCWs) are a particularly important target population for this intervention because—if they themselves develop TB disease—they place at risk the many patients regularly encountered in their work.

Completion rates for treatment of latent TB infection are modest across treatment programs in general. Initiation and successful completion of therapy for latent TB infection among HCWs constitutes a particularly important goal—and a major challenge. Appropriate strategies are needed that can (1) identify the reasons for poor treatment initiation rates, (2) clarify the basis for poor adherence among those initiating treatment, and (3) promote high rates of initiation and completion of treatment.

At the Charles P. Felton National Tuberculosis Center at Harlem Hospital, we developed a program that was able to identify the underlying barriers and then dramatically improve rates of initiation and completion of treatment of latent TB infection. Through this process we learned a great deal that can be generalized to other health care institutions across the country. The purpose of this guide is, first, to summarize the highlights of our program, and then describe the steps that other institutions can follow in designing and implementing a program of their own.

BACKGROUND

At Harlem Hospital we observed that many HCWs referred to the Chest Clinic from the Employee Health Service (EHS) because of a positive tuberculin skin test (TST) either did not keep their appointments, or did not return after their initial visit. In addition, only a small proportion of those HCWs who initiated treatment for latent TB infection returned to the Clinic for their monthly visits and continued to take their medication.

We documented the rates of initiation and completion of treatment for latent TB infection over a one-year period among HCWs at Harlem Hospital by reviewing the charts and pharmacy records of all HCWs who were found to be TST positive during an annual or pre-employment physical. This constituted our pre-intervention baseline data. It showed that, prior to our new program, only 55% of HCWs at Harlem Hospital who were eligible for treatment of latent TB infection actually began their treatment. Of those who began and were scheduled to finish in 6 months, only 11% completed therapy.

Barriers to initiation and completion of treatment were identified through interviews with hospital HCWs, chest clinic staff, and staff at EHS. Some of the barriers to initiation included lack of knowledge about TB and fear of medication side effects. Barriers to completing treatment included long wait times, inflexible appointment schedules, lengthy assessments by multiple providers, and lack of an appointment reminder system. Based on these findings, we developed a series of potential solutions to address these barriers. We initiated a multifaceted program the following year, including educational, structural, and supportive components, e.g., provision of specific educational materials, expedited medical assessment, and an active reminder system.

In the first full year of the implementation of the new **"Fast Track"** program, 72% of eligible employees initiated therapy. Of those eligible for completion, 81% actually did so.

This guide describes the procedures we followed and delineates methods that may be useful for other institutions to develop a similar program.

BASELINE DOCUMENTATION AND PREPARATORY STEPS

1. **Discuss the program to be developed with decision-makers in the relevant departments.** Obtain their input on how to define the scope of the problem and collect data.
2. **Identify the scope of the current problem in the facility.** Before designing and implementing a program to improve initiation and completion of latent TB infection treatment, it is essential to determine current treatment completion rates. If available, data from Employee Health Service (EHS) on current rates of initiation and completion of treatment for latent TB infection should be collected for the preceding year. This can be used to set appropriate objectives and monitor the program.
 - EHS can assist in retrieving the names of all employees who were TST positive during their annual assessment the previous year. The data to be collected should include: number of HCWs skin tested; number who returned for reading; number who were eligible for latent TB infection treatment; number who initiated treatment for latent TB infection; and number who completed treatment. The rates of initiation and completion of treatment for latent TB infection should be calculated. Treatment completion rates should be broken down by informative categories, e.g. age, job category, gender (see sample characteristics in Appendix A).
 - A review of the pharmacy list of all HCWs who picked up medication each month, if available, will indicate whether HCWs retrieved their medication supply at the specified intervals. This list can be obtained from the main pharmacy in your institution; however, it might be difficult to obtain due to confidentiality concerns and your agency's policy.
3. **Identify barriers that stand in the way of initiation and completion of treatment.** This can be done through interviews or focus group discussions with employees, clinic staff, and the staff of the EHS. The primary principle to keep in mind is the necessity of seeking information from a diversity of providers on the one hand, and of HCWs (clients) on the other.
4. **Take the data back to decision-makers.** All of the relevant departments, such as EHS and Human Resources, must be on-board and involved in structuring the solutions. You will need their buy-in for the new program to be successful.
5. **Give one person—the Program Coordinator—the responsibility to serve as educator, navigator, and support system for the HCWs.** Once the program is established, this may only be a part-time task. The role of the “Program Coordinator” is described further on pages 8-9. A designated person must play this key role in order for the program to be successful.

PROGRAM DEVELOPMENT:

A. Potential Barriers

The following are some of the barriers that were identified through interviewing HCWs at Harlem Hospital, staff at EHS, and staff at the chest clinic. Barriers may differ at your facility; this should be taken into account when developing this component of your program.

Scheduling and Structural Issues

DELAYS IN HCWS GETTING SERVICES IN EHS, CHEST CLINIC, X-RAY DEPARTMENT, LABORATORY, AND PHARMACY:

- Lengthy waiting times
- Lengthy assessments by multiple providers (e.g. nurse, then MD, back to nurse)
- Lack of rapid access to medications

SYSTEMS MAY BE WEAK OR LACKING FOR:

- Tracking appointments and reminding clients ahead of time
- Reinforcing the importance of initiation and completion of treatment for latent TB infection
- In addition, work schedules may make it difficult for HCWs to keep appointments during working hours.

Information and Attitudinal Issues

- Fear of medication side effects
- Belief that prior BCG vaccination protects against development of TB disease
- Belief that prior BCG vaccination is responsible for the positive TST
- Perception of not being at risk for TB, and thus not needing treatment
- Lack of knowledge about TB, especially the context and importance of treating latent TB infection
- Cultural beliefs that TB infection and TB disease can be treated with alternative modalities, e.g., herbs
- Confidentiality concerns, i.e., fear that others may find out that they are being treated for latent TB infection
- Health care providers are unclear about indications for treatment of latent TB infection

PROGRAM DEVELOPMENT:

B. Barriers and Potential Solutions

Scheduling and Structural Issues

LONG WAIT IN EHS, CLINIC, X-RAY DEPARTMENT, LABORATORY, OR PHARMACY

1. Develop pre-packaged evaluation kits for EHS to give to HCWs. These kits contain educational materials (see Appendices B, C, D, and E), intake form (Appendix F), X-ray and lab requisition slips. Requisition slips are distinctively colored and stamped *PRIORITY*. HCWs go to X-ray and lab before going to the chest clinic.
2. In the chest clinic, establish separate medical records for employees (duplicate record is made using carbonless copy paper; a copy of which should be sent to EHS). These medical records can be of a different color from those of other clinic patients and they can be kept in a different location, possibly with the Program Coordinator. This ensures easy access to the medical records.
3. Facilitate rapid evaluation by prioritizing clinic visits and expediting laboratory tests and radiologic assessments. The Program Coordinator should then be informed by EHS whenever an employee is referred to the clinic. When an employee comes to the clinic, the Program Coordinator should ensure that the employee gets registered and sees the physician and nurse immediately. This is especially important due to the time constraints of HCWs.
4. Provide medications directly to the HCW on the day of the scheduled visit. The Program Coordinator should pick up the medication from the pharmacy before the employee comes to the clinic—in order to speed up the process.
5. Use a self-assessment tool (see Appendix G) to be completed by the employee at each monthly visit. The Coordinator should review the questionnaire. Employees with no side effects or complaints or morbid conditions then pick up their medication immediately from the Coordinator.

FORGETTING CLINIC APPOINTMENTS, OR UNABLE TO KEEP AN APPOINTMENT

1. Develop a reminder system to inform patients of an upcoming appointment. Employees should be called the day before their scheduled appointment to be reminded of the time and place.
2. Reschedule missed appointments promptly. If an appointment is missed, the Program Coordinator should call the employee and schedule another as soon as possible.
3. The Program Coordinator must keep a record of all appointments missed and phone calls made, using the activity and visit outcome forms (see Appendices H and I).

Information and Attitudinal Issues

FEAR OF SIDE EFFECTS FROM MEDICATION

- Provide educational materials that describe potential side effects, their likelihood, how to monitor for side effects, and how to manage them if they occur (see brochure, Appendix D and fact sheet, Appendix E)
- The Program Coordinator should be available to the HCW to answer all related questions and concerns.
- HCWs should be encouraged to call the Program Coordinator at any time if they have additional questions or concerns.

MISCONCEPTIONS ABOUT BCG VACCINE

- Provide educational materials about BCG, information on its effectiveness, its impact on TST interpretation, etc. (see Appendix C). A HCW from the same or similar background, who has completed treatment for latent TB infection, can be especially useful.

- Commonly asked questions and answers:

Question: Could the BCG vaccine have caused my TB test to be positive?

Answer: It could, but the positive skin test is more likely to indicate latent TB infection. This is because BCG is usually given in countries with high rates of TB, where risk of infection is substantial.

Question: Will the BCG vaccine prevent me from getting TB infection or TB disease?

Answer: The BCG vaccine does not prevent TB infection or TB disease in adults.

LACK OF KNOWLEDGE ABOUT TB INFECTION, PERCEPTION OF NOT BEING AT RISK, AND SPECIFIC CULTURAL BELIEFS

- One-on-one education of HCWs: start by administering the knowledge and attitudes questionnaires (Appendix J) and listening to their beliefs; build on what they already know
- Provide information about the importance of completing treatment for latent TB infection in language the client understands
- Do not discourage alternative treatments if they will do no harm and the client agrees to take treatment for latent TB infection at the same time
- Encourage HCWs to call the Program Coordinator if they have any questions or concerns

CONFIDENTIALITY CONCERNS

- HCWs' absence from daily routine is rarely noticed because systems effectively provide rapid medical evaluation, self-assessment of side effects, and resupply of medications
- If medications are delivered to HCW outside the clinic, this is done inconspicuously
- HCWs' charts are maintained by the Program Coordinator; only direct providers of care are given access
- Final disposition of treatment for latent TB infection becomes a part of the HCW's confidential medical record at EHS

HEALTH CARE PROVIDERS ARE UNCLEAR ABOUT INDICATIONS FOR TREATMENT OF LATENT TB INFECTION

- Educate and train providers in the EHS (physicians, physician assistants, and nurses)
- Educate and train treating physicians in your clinic so that they can reinforce the importance of treatment of latent TB infection in appropriate candidates. This training can use didactic materials, as well as develop communication skills through role-playing.
- Implement in-house training for other providers, e.g., nurses, social workers.

Training materials can be obtained from the National TB Centers, the Centers for Disease Control and Prevention (CDC), and your local or state health departments. The Program Coordinator should identify appropriate training materials and facilitate access to them (see Appendix K).

PROGRAM DEVELOPMENT:

C. Getting Started

Key Program Components

1. Identify a Program Coordinator, e.g., health educator, social worker, caseworker, or nurse, to spearhead the program. This person will have the role described below and should be selected based on their TB knowledge, good communication skills, and resourcefulness.
2. Develop systems to expedite patient registration and medication pick up. This can be accomplished through training of clerical staff and nursing staff to the specific needs of HCW clients.
3. Develop a reminder system for appointments and a follow-up system for missed appointments. The Program Coordinator should maintain records of HCW's appointments, status of completion of appointment, record of reminder calls, etc. (see Appendices H and I).
4. Develop a self-assessment tool to monitor side effects and eliminate unnecessary delays due to consultations with providers (see Appendix G).
5. Develop special medical records for HCWs that are kept at the Clinic to expedite assessments. The HCW's medical records should include: initial registration form, monthly self-assessment forms, TB knowledge and attitude questionnaire, laboratory results, and referral with TB skin test result from EHS.
6. Give priority for HCWs to see provider. If needed, the Program Coordinator should serve as a liaison and facilitator to expedite assessment.
7. Develop a stream-lined way of resupplying medications on a monthly basis with no delay for the HCW, who has to take time out of his/her busy workday. The Program Coordinator should secure the prescription, obtain medication from the pharmacy, and deliver it to the HCW.
8. Provide appropriate educational materials targeted to HCWs to provide information on latent TB infection therapy, BCG, and other relevant issues. Such materials can be obtained from your local or state health department or the Centers for Disease Control and Prevention. The Program Coordinator should ensure that appropriate educational materials are available (see Appendices B, C, D, E, and K).
9. Develop a marketing plan for disseminating information about the program. This plan may include developing a brochure (see Appendix B), promoting the program at in-service training, and communicating information through departmental conferences.

PROGRAM DEVELOPMENT:

D. Role of the Program Coordinator

The key component in overcoming barriers is the identification of a person to coordinate this process. This person may be a health educator, a nurse, or another staff member. Once the program is established, this is usually only a part-time task.

WHAT THE HCW/CLIENT DOES

Goes to EHS for the required annual or pre-employment physical exam, including TST

Reports to the Clinic if TST is positive; get chest x-ray and medical assessment to see if treatment for latent TB infection is recommended

Becomes informed about TB infection and disease, and the importance of completing treatment for latent TB infection

Comes to the Clinic or another convenient location for monthly self-assessment visits and resupply of medications

WHAT THE PROGRAM COORDINATOR DOES

Establishes a close, collaborative relationship with EHS team; serve as liaison to the EHS

Establishes a close, collaborative relationship with the clinic team; serve as liaison to the clinic

1. **If employee is not a candidate for treatment of latent TB infection:**
educates employee about TB, infection control, signs and symptoms of TB disease, and seeking medical assistance if these appear

2. **If treatment of latent TB infection is recommended for employee:**
 - Educates employee about TB, treatment for latent TB infection, side effects, and importance of completion of treatment
 - Gives monthly reminder before next appointment
 - Has pre-filled prescriptions ready
 - Gives employee self-assessment form
 - Gives 1-month supply of medications if no complaints of side effects
 - Arranges immediate consultation with physician or nurse, if needed
 - Follows-up missed appointments promptly

EVALUATION OF PROGRAM OUTCOMES

Development of an evaluation plan is critical before initiating the program. Assessment should take place at predetermined intervals to identify any need for modifications in the program. Outcomes of potential interest include the following:

- Proportion of eligible HCWs who initiate treatment for latent TB infection
- Proportion of scheduled visits completed
- On-time treatment completion rate
- HCW satisfaction with the program (see Appendix L)

The following shows an example of before and after evaluation:

EXAMPLE: HOSPITAL X

BEFORE INTERVENTION	#	%	AFTER INTERVENTION	#	%
# employees tested	700		# employees tested	700	
# returned for reading	680		# returned for reading	680	
% returned for reading	680/700	97%	% returned for reading	680/700	97%
# TST positive	88		# TST positive	88	
% TST positive	88/680	13%	% TST positive	88/680	13%
# eligible for Tx	70		# eligible for Tx	72	
% eligible for Tx	70/88	80%	% eligible for Tx	72/88	82%
# who initiate Tx	35		# who initiate Tx	61	
% who initiate Tx	35/70	50%	% who initiate Tx	61/72	85%
# who complete Tx	4		# who complete Tx	52	
% who complete Tx	4/35	11%	% who complete Tx	52/61	85%

APPENDIX A: Characteristics of Employees Starting Latent TB Infection Treatment at Hospital X

CHARACTERISTICS OF EMPLOYEES	NUMBER	PERCENT	NUMBER COMPLETING	COMPLETION RATE
Gender				
Male	48	63%		6%
Female	28	37%		14%
Age Range	19-69			
Median Age	34			
EMPLOYEE TYPE				
Physician/PA	29	38%	1	3%
Nurses	3	4%	1	33%
Volunteer/Students	13	17%	1	8%
Clerical/Case Manager	10	13%	2	20%
Food Services/Housekeeping	8	11%	1	12%
Other	13	17%	2	16%
Total	76	100%	8	

APPENDIX B: BROCHURE – Fast-Track TB Special Program

Who is Eligible?

Any employee at Harlem Hospital who has a positive TB skin test (PPD) and needs preventive therapy is eligible for this program.

Why is preventive therapy important?

- If you have TB infection, a positive PPD, the TB bacteria in your body can cause you to get TB disease later on. Preventive therapy will kill TB bacteria and almost eliminate any chance of infection progressing to disease.
- Tuberculosis is a serious illness that can make you and others very sick. It is therefore very important for you to take preventive therapy (INH).

For more information please call

Joan Coley
Sr. Health Educator
(212) 939-8260

Dr. Wafaa El-Sadr
Research Director
(212) 939-2936

Dr. Garry Souffrant
Medical Director
(212) 939-8241



Fast Track TB Special Program for Health Care Workers with TB Infection (PPD POSITIVE)



**Charles P. Felton
National Tuberculosis
Center
At Harlem Hospital**

What is Fast Track TB?

Fast Track is a special program that will make it easier for employees at Harlem Hospital with a positive tuberculin skin test to complete preventive therapy with isoniazid (INH).

We developed this special program for our employees because we recognize that it is often difficult to complete therapy. We would like to work very closely with you to make it as easy as possible for you to complete your treatment. If you have any questions don't hesitate to call our health educator, Joan Coley at (212) 939 - 8260.

How will this program work?

Fast track will make it easier to complete preventive therapy by:

- Giving employees priority to be seen in the clinic.
- Giving employees priority in X-ray department and laboratory.
- Providing employees with medication on the day of their scheduled visit.
- Scheduling appointments at a convenient time for employees.
- Making appointment reminders and rescheduling missed appointments as soon as possible.
- Providing educational materials on preventive therapy, BCG, side effects of medication, etc.
- Providing incentives for employees to complete therapy.

What are our goals?

Our goal is to:

- Ensure rapid evaluation of health care workers at Harlem Hospital who are eligible for preventive therapy.
- Ensure completion of preventive therapy among health care workers who are eligible for preventive therapy.

APPENDIX C: Brochure - The BCG Vaccine

ALL SERVICES FREE TO THE PATIENT

Chest Clinics

New York City Department of Health • Bureau of Tuberculosis Control
ALL CLINICS ARE NEAR PUBLIC TRANSPORTATION.

The Bronx

Morrisania
Chest Center:
Hours: 1309 Fulton Avenue
Mon.-Fri., 8:30-5:30;
Sat., 8:30-4:30 718-901-6536/8

Brooklyn

Bedford:
Hours: 485 Throop Avenue
Mon.-Fri., 8:30-4:30;
1st & 3rd Sat. of every month, 8:30-4:30 718-574-2462/3

Brownsville:
Hours: 259 Bristol Street
Mon.-Fri., 8:30-4:30 718-495-7256/8

Bushwick:
Hours: 335 Central Avenue
Tues., Wed., Thurs., 8:30-4:30 718-573-4886/4891

Ft. Greene:
Hours: 295 Flatbush Avenue Extension
Mon., Thurs., 8:30-7:00; Tues.,
Wed., Fri., 8:30-5:00; Sat., 8:30-4:30 718-643-8357/6551

Manhattan

Chelsea:
Hours: 303 9th Avenue
Mon., Thurs., 8:30-7:00;
Tues., Wed., Fri., 8:30-5:00;
2nd & 4th Sat. of every month, 8:30-4:30 212-239-1749/57

Washington Heights
Chest Center:
Hours: 600 W. 168th Street
Mon.-Thurs., 8:30-6:00; Fri., 8:30-12:30;
1st & 3rd Sat. of every month, 8:30-4:30 212-304-5435

Queens

Corona:
Hours: 34-33 Junction Boulevard
Mon., Thurs., 8:30-7:00;
Tues., Wed., Fri., 8:00-5:00; Sat., 8:30-4:30 718-476-7635/6

Far Rockaway:
Hours: 67-10 Rockaway Beach Boulevard
Mon., 8:30-12:30; Fri., 8:30-4:30 718-474-2100/1

Staten Island

Richmond:
Hours: 51 Stuyvesant Place
Mon.-Fri., 8:30-4:30 718-983-4530



THE CITY OF NEW YORK DEPARTMENT OF HEALTH
Rudolph W. Giuliani, Mayor
Neal L. Cohen, MD, Commissioner
For more information call 212-442-9968 or 212-442-6940 or
visit our website at: <http://www.ci.nyc.ny.us/health>

REVISED MAY 99

New York City Department of Health
BUREAU OF TUBERCULOSIS CONTROL

THE BCG VACCINE



IF YOU HAD THE BCG VACCINE,
HERE'S WHAT YOU NEED TO KNOW

INFORMATION FOR PEOPLE WHO HAD BCG VACCINE

If you had BCG vaccine as a child and you are now being tested for TB, here are some important things to know:

- Tuberculosis (TB) is an infectious disease that is common in many countries.
- TB infection is spread through the air by someone who has TB disease of the lungs.
- People who just have TB infection are not sick and cannot spread the bacteria. Only people with TB disease can infect others.
- Some people with TB infection develop TB disease. They get very sick with a cough that does not go away.

They often have fever, night sweats, and even lose weight. They can infect others and must get treatment.

- The BCG vaccine does not keep someone from getting TB infection. It provides only weak protection from TB disease, and this is not long lasting. This is why BCG is not generally used in the United States.



Answers to some questions you may have about BCG:

What is BCG?

BCG stands for *bacille Calmette-Guérin*, which is a vaccine made of a live, weakened strain of the TB bacteria. It is used in many countries.

Why was I given BCG?

BCG is usually given to very young children in countries with high rates of TB. It prevents the more serious forms of TB disease from developing in children.

Does BCG work?

In general, BCG does not prevent TB infection or TB disease. BCG has only been proven to prevent young children from developing TB of the brain and other serious forms of the disease.

How long does my BCG vaccine last?

BCG protection decreases with time. It is usually not effective after 5 years. So if you had your BCG vaccine more than 5 years ago, it is no longer effective.

Could my BCG cause me to have a positive TB test?

BCG given several years ago should not make you test positive for TB, but let your doctor know when you had your BCG and if you had more than one.

If you have any other questions about BCG or want a TB test, call the New York City Department of Health, Bureau of TB Control at: 212-442-9968 or 212-442-6940 and ask to speak to a public health educator.

HELP US PREVENT TB—GET TESTED NOW!

Departamento de Salud de la Ciudad de Nueva York
Oficina de Tuberculosis Clínicas Para El Pecho

Bronx

Morrisania
Chest Center: 1309 Fulton Avenue 718-901-6556/8
 Horas: Lunes-Viernes, 8:30-5:30;
 Sábado, 8:30-4:30

Brooklyn

Bedford: 485 Throop Avenue 718-574-2462/3
 Horas: Lunes-Viernes, 8:30-4:30;
 1 y 3 Sábado del mes, 8:30-4:30

Brownsville: 259 Bristol Street 718-495-7256/8
 Horas: Lunes-Viernes, 8:30-4:30

Bushwick: 335 Central Avenue 212-573-4886/4891
 Horas: Martes-Jueves, 8:30-4:30

Ft. Greene: 295 Flatbush Ave. Extension 718-643-8357/6551
 Horas: Lunes, Jueves, 8:30-7:00;
 Martes, Miércoles, Viernes, 8:30-5:00;
 Sábado, 8:30-4:30

Manhattan

Chelsea: 303 9th Avenue 212-239-1749/57
 Horas: Lunes, Jueves, 8:30-7:00;
 Martes, Miércoles, Viernes, 8:30-5:00;
 2 y 4 Sábado del mes, 8:30-4:30

Washington Heights
Chest Center: 600 West 168th Street 212-304-5435
 Horas: Lunes-Jueves, 8:30-6:00; Viernes, 8:30-12:30;
 1 y 3 Sábado del mes, 8:30-4:30

Queens

Corona: 34-33 Junction Boulevard 718-476-7635/6
 Horas: Lunes, Jueves, 8:30-7:00;
 Martes, Miércoles, Viernes, 8:00-5:00;
 Sábado, 8:30-4:30

Far Rockaway: 67-10 Rockaway Beach Boulevard 718-474-2100/1
 Horas: Lunes-12:30;
 Viernes, 8:30-4:30

Staten Island

Richmond: 51 Stuyvesant Place 718-983-4530
 Horas: Lunes-Viernes, 8:30-4:30

Todas las clínicas están cerca del transporte público.

REVISED MAY 99

Departamento de Salud de la Ciudad de Nueva York
 UNIDAD DE CONTROL DE LA TUBERCULOSIS

**LA VACUNA
 BCG**

**Si a usted le han puesto
 la Vacuna BCG,
 necesita saber que...**



INFORMACION PARA PERSONAS QUE HAN RECIBIDO LA VACUNA BCG

Si cuando niño recibió la vacuna BCG y ahora va a recibir la prueba de la tuberculina (PPD), debe saber lo siguiente:

- La tuberculosis (TB) es una enfermedad infecciosa y es muy común en muchos países.
- La infección se propaga a través del aire por alguien que tiene la enfermedad de la TB en los pulmones o garganta y no está recibiendo tratamiento.
- La gente que solamente tiene infección de la tuberculosis no está enferma y no puede propagar la bacteria (germen). Solamente la gente enferma con TB puede infectar a otros.

- Algunas personas con infección de tuberculosis desarrollan la enfermedad de la tuberculosis. Se ponen muy enfermos con una tos que no mejora ni desaparece.

Ellos tienen fiebre a menudo, sudores nocturnos y también pierden peso. Ellos sí pueden infectar a otros, por lo tanto deben comenzar tratamiento rápido.

- La vacuna BCG no evita que usted se infecte con tuberculosis. Esta sólo ayuda un poquito a evitar desarrollar la enfermedad de la TB, y esto no dura por mucho tiempo. Por esa razón en los Estados Unidos generalmente no se usa.



Respuestas para algunas preguntas acerca de la Vacuna BCG

¿Qué es BCG?

BCG es Bacilo de Calmette-Guérin, la cual es una vacuna hecha de la cepa viva y debilitada de la bacteria de la tuberculosis.

¿Porqué me pusieron BCG?

La BCG se le pone usualmente a los infantes y niños de diferentes edades en países donde existe un alto índice de TB, ya que la vacuna previene las formas más serias de tuberculosis en los niños.

¿Trabaja la vacuna BCG?

La BCG no previene que la persona se infecte con TB ni que desarrolle la enfermedad de la tuberculosis. Se ha comprobado que la BCG sólo previene que los niños desarrollen tuberculosis del cerebro y otras complicaciones serias.

¿Por cuánto tiempo me protege la BCG?

La protección de la BCG desaparece con el tiempo. Usualmente no es efectiva después de los cinco años, de manera que si usted se la puso cinco años atrás, la vacuna ya dejó de ser efectiva.

¿Me provoca la vacuna BCG una prueba de TB positiva?

Una BCG puesta algunos años atrás no debe hacer que la prueba de la TB sea positiva, pero díglele a su médico la fecha cuando se puso la BCG y si se ha puesto más de una.

Si tiene cualquier otra pregunta acerca de la vacuna BCG o necesita hacerse la prueba, llame al Departamento de Salud de la Ciudad de Nueva York TB Control.

212-442-9968 ó 212-442-6940

Y pregunte por un Educador de de Salud Pública, ó visite a nuestro website: www.ci.nyc.ny.us/health

¡AYUDENOS A PREVENIR LA TB- HAGASE LA PRUEBA AHORA!

APPENDIX D: Brochure – Therapy to Prevent Tuberculosis

CHEST CLINICS

New York City Department of Health • Bureau of Tuberculosis Control
ALL SERVICES ARE FREE AND CONFIDENTIAL
ALL CLINICS ARE NEAR PUBLIC TRANSPORTATION

The Bronx

Morrisania
Chest Center: 1309 Fulton Avenue 718-901-6536/8
Mon.–Fri., 8:00-5:30;
Sat., 8:30-4:30
Hours:

Brooklyn

Bedford: 485 Throop Avenue 718-574-2462/3
Mon.–Fri., 8:30-4:30;
1st & 3rd Sat. of every month, 8:30-4:30
Hours:

Brownsville: 259 Bristol Street 718-495-7256/8
Mon.–Fri., 8:30-4:30
Hours:

Bushwick: 335 Central Avenue 718-573-4886/4891
Tues., Wed., Thurs., 8:30-4:30
Hours:

Ft. Greene: 295 Flatbush Avenue Extension 718-643-8357/6551
Mon., Thurs., 8:30-7:00; Tues.,
Wed., Fri., 8:30-5:00; Sat., 8:30-4:30
Hours:

Manhattan

Chelsea: 303 9th Avenue 212-239-1749/57
Mon., Thurs., 8:30-7:00;
Tues., Wed., Fri., 8:30-5:00;
2nd & 4th Sat. of every month, 8:30-4:30
Hours:

Washington Heights 600 W. 168th Street 212-304-5435
Chest Center: Mon.–Thurs., 8:30-6:00; Fri., 8:30-12:30
Hours: 1st & 3rd Sat. of every month, 8:30-4:30

Queens

Corona: 34-33 Junction Boulevard 718-476-7635/6
Mon., Thurs., 8:00-7:00;
Tues., Wed., Fri., 8:00-5:00; Sat., 8:30-4:30
Hours:

Far Rockaway: 67-10 Rockaway Beach Boulevard 718-474-2100/1
Hours: Mon., 8:30-12:30; Fri., 8:30-4:30

Staten Island

Richmond: 51 Stuyvesant Place 718-983-4530
Hours: Mon.–Fri., 8:30-4:30



THE CITY OF NEW YORK DEPARTMENT OF HEALTH
Rudolph W. Giuliani, Mayor
Neal L. Cohen, MD, Commissioner
For more information call 212-442-9968 or 212-442-6940 or
visit our website at: <http://www.ci.nyc.ny.us/health>

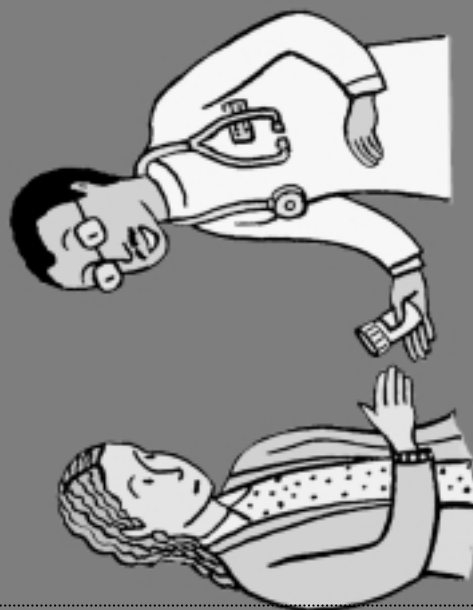
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FREE, HIGH-QUALITY CARE

New York City Department of Health
BUREAU OF TUBERCULOSIS CONTROL

Treatment to Prevent Tuberculosis (TB)

Why do I need it?



Questions and Answers About Preventive Treatment

What is preventive treatment?

This is medicine that prevents you from getting tuberculosis, or TB. TB is a serious disease that can damage your lungs or other parts of your body.

You don't have TB now. But if you have a positive TB skin test, you probably have TB germs in your body. This means that you could develop TB in the future, unless you take preventive treatment.

Why do I need preventive treatment?

Right now the TB germs in your body are not active. This is called **TB infection**. People with TB infection do **NOT** feel sick, and they **CANNOT** spread TB germs to other people.

But the TB germs can become active at any time. If this happens, you will develop **TB disease**, and

- You will feel sick

- You may spread TB germs to other people, such as your family and friends, by coughing
- You will need to take several medicines for a long time

If you take preventive treatment, you will kill the TB germs in your body now, before you ever get TB disease. This protects not just you, but other people you care about.

Why do I have to take medicine if I don't feel sick?

You don't feel sick now, because the TB germs in your body are not active. But these germs can become active at any time, especially in

- Young children
- People recently exposed to TB
- HIV-positive people
- People with certain medical conditions, such as diabetes or kidney disease

Preventive treatment kills TB germs before they become active and cause TB disease.

What if I had BCG vaccine?

BCG vaccine does not always protect against TB. People who have had BCG vaccine can still get TB infection and TB disease.

If you have a positive TB skin test and you are younger than 35 or you are at high risk for TB, you need preventive treatment—even if you have had BCG vaccine.

What medicines do I take for preventive treatment?

Doctors usually prescribe a drug called isoniazid, or **INH**. Sometimes doctors will also prescribe Vitamin B6. These medicines are free to patients at any health department chest clinic.

Is INH safe?

Yes. INH is the best medicine to kill TB germs, and it is safe. But as with any medicine, a few people may have side effects. Talk to your doctor or nurse if you have any questions.

Why do I need monthly check-ups?

While you are taking INH, it is very important that you see the doctor or nurse **every month** to

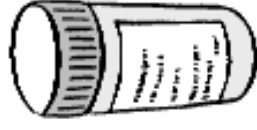
- Make sure you're not having any side effects
- Check your health and answer your questions
- Get the next month's supply of INH

How long do I have to take the medicine?

To kill TB germs, INH must be taken regularly for **6–12 months**.

You need to take **ALL** of your medicine for the whole time. You should not stop taking the medicine early, and you should not miss any doses.

This is the only way to prevent TB disease.



YOU CAN PREVENT TB!

APPENDIX E: Brochure — Facts about INH

New York City Department of Health
BUREAU OF TUBERCULOSIS CONTROL

FACTS ABOUT INH

Your doctor has prescribed isoniazid, or INH, to protect you from getting tuberculosis (TB). Here are some things you should know about INH:

- To prevent TB, you must take ALL of your medicine for the WHOLE time. This means
 - 6 months if you are an adult
 - 9 months if you are younger than 18
 - 12 months if you are HIV positive
 - 12 months if you have scarring on your chest x-ray
- Try to take INH at the same time every day. Many people find it best to take INH just before bedtime because it makes them a little sleepy.
- If you forget to take your medicine, do not take extra pills the next day, but tell your doctor or nurse. Never take more than the prescribed amount each day.
- Do NOT drink alcohol while you are taking INH.
- Do not take other medicines, including Tylenol, unless you ask your doctor first.
- INH is the best medicine to fight TB germs, and it is safe. But as with any medicine, a few people may have side effects. The possible side effects are
 - Nausea
 - Vomiting
 - Loss of appetite
 - Yellow skin and eyes
 - Dark urine
 - Skin rash

If you have any of these side effects, **stop taking INH** and tell your doctor or nurse right away.

- While you are taking INH, you need to see your doctor or nurse every month to
 - Make sure you're not having any side effects
 - Check your health and answer your questions
 - Get the next month's supply of INH
- It's not easy to take medicine when you don't feel sick. But by taking INH now, you reduce your risk of getting TB disease in the future. Treatment for TB disease is more difficult.

If you have any questions, call your clinic.



Rudolph W. Giuliani, *Mayor*
Neal L. Cohen, *Commissioner*

APPENDIX F: Tuberculin Screening—Initial Form

Chart #: _____ Social Security Number (optional) _____ - _____ - _____

Name: Last: _____ First: _____ Middle: _____

Address: _____

City: _____ State: _____ Zip: _____

Home Telephone: () _____ - _____ Work Telephone: () _____ - _____

Beeper: _____ Hospital mailing address: _____

Birthdate: ____ / ____ / ____

Sex: ☐ Male ☐ Female

Race/Ethnicity: ☐ White, not Hispanic

☐ Asian or Pacific Islander

☐ Black, not Hispanic

☐ American Indian or Alaskan Native

☐ Hispanic

☐ Other specify: _____

Were you born in the U.S.? ☐ Yes ☐ No

If No, country of birth: _____

Year entered the U.S.: _____ or ☐ Don't know

Have you ever received BCG (Bacille Calmette-Guérin) vaccine?

(BCG is a tuberculin vaccine, NOT a PPD or tuberculin skin test).

☐ Yes ☐ No ☐ Don't know

If yes, year received last vaccine: _____ or ☐ Don't know year.

Have you ever had active TB? ☐ Yes ☐ No ☐ Don't know

Current TST Result Date: ____ / ____ / ____

Current TST Result: ____ mm

Previous TST Result Date: ____ / ____ / ____

Result (circle one): Positive / Negative

Documented? ☐ Yes ☐ No

Which of the following describes your work location/ward? (Check only one.)

☐ 1. Work 75% or more of the time at one location/ward,
specify: _____

☐ 2. Work at multiple locations/wards

What is your job title/occupation? _____

Department: _____

Date Started at Harlem Hospital (month/year) ____ / ____

Physicians and Physician's Assistants, please specify service/specialty: _____

Date form completed: ____ / ____ / ____

Signature

APPENDIX G: Fast Track Employee Self-Assessment Form

Charles P. Felton
National Tuberculosis Center
at Harlem Hospital
2238 Fifth Ave., First Floor
New York, N.Y. 10037

Date: ____/____/____

Current Medication:

Date medication started: ____/____/____

Do you have any of these complaints?

	Yes	No		Yes	No		Yes	No
Fever	<input type="checkbox"/>	<input type="checkbox"/>	Poor appetite	<input type="checkbox"/>	<input type="checkbox"/>	Itching	<input type="checkbox"/>	<input type="checkbox"/>
Rash	<input type="checkbox"/>	<input type="checkbox"/>	Nausea	<input type="checkbox"/>	<input type="checkbox"/>	Fatigue	<input type="checkbox"/>	<input type="checkbox"/>
Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	Problem with Vision	<input type="checkbox"/>	<input type="checkbox"/>	Pain, tingling or numbness in legs or arms	<input type="checkbox"/>	<input type="checkbox"/>
Abdominal Pain	<input type="checkbox"/>	<input type="checkbox"/>	Yellow Eyes	<input type="checkbox"/>	<input type="checkbox"/>	Dark Urine	<input type="checkbox"/>	<input type="checkbox"/>

Other (specify): _____

Do you need to see doctor? Yes ☐ No ☐

Did you miss any medication? Yes ☐ No ☐ If yes, how many days? _____

Do you need to see Educator? Yes ☐ No ☐

Triage decision: ☐ MD F/Up ☐ Refill Medications

Coordinator's Signature

Date: ____/____/____

Return visit date: ____/____/____

APPENDIX H: Fast Track Activity Form

Name: _____ Chart #: _____

[illegible]

APPENDIX J (PART 1): Questionnaire on TB Knowledge

This questionnaire is designed to find out how much you know about tuberculosis.

PLEASE INDICATE IF THE FOLLOWING STATEMENTS ARE TRUE OR FALSE, OR IF YOU DON'T KNOW.

	True	False	Don't Know
1. It is easier to get TB by living in crowded conditions.	1	0	9
2. A person can get TB by sharing dishes or utensils with someone who has TB.	1	0	9
3. A person can get TB by touching something that someone with TB has coughed on.	1	0	9
4. You are more likely to get TB from a stranger than from a family member.	1	0	9
5. Which of the following are symptoms of TB?			
a. losing weight	1	0	9
b. having night sweats	1	0	9
c. coughing	1	0	9
d. swelling of feet	1	0	9
e. yellow sputum	1	0	9
6. A positive TB skin test means that you already have TB disease.	1	0	9
7. Taking medication can cure almost all cases of TB.	1	0	9
8. Treatment of TB can be completed in as little as one month.	1	0	9
9. People who have HIV are more likely to get sick with TB.	1	0	9
10. Being infected with TB does not mean you are sick with TB.	1	0	9
11. A person with TB disease can look and feel fine.	1	0	9

ANSWER KEY:

1) T; 2) F; 3) F; 4) F; 5) a=T, b=T, c=T, d=F, e=F; 6) F; 7) T; 8) F; 9) T; 10) T; 11) T.

APPENDIX J (PART 2): Questionnaire on Attitudes about Treatment for TB Infection and Disease

Scale	1	Strongly Disagree
	2	Disagree Somewhat
	3	Agree Somewhat
	4	Strongly Agree

		PLEASE CIRCLE
1.	I believe I have the TB germ in your body.	1 2 3 4
2.	My positive TB test is likely to be because of the BCG vaccine.	1 2 3 4
3.	The BCG vaccine will prevent me from getting TB disease.	1 2 3 4
4.	No matter what I do, I could still get TB disease.	1 2 3 4
5.	People with positive skin tests may need to take TB medicine.	1 2 3 4
6.	Taking medicine to prevent my getting TB disease is very important.	1 2 3 4
7.	Taking my medicine is a hassle.	1 2 3 4
8.	It will take something very serious to keep me from taking my medicine.	1 2 3 4
9.	Going to appointments is more trouble than it is worth.	1 2 3 4
10.	If I do the right thing, I can avoid getting sick with TB disease.	1 2 3 4

Some people don't complete their treatment for TB infection. Please give three reasons why someone would not complete their treatment.

1) _____

2) _____

3) _____

APPENDIX K: Sources for TB Educational Materials

- **LOCAL OR STATE HEALTH DEPARTMENT OR AMERICAN LUNG ASSOCIATION**
- **THE NEW YORK CITY DEPARTMENT OF HEALTH**
Tuberculosis Control Program
Education and Training Unit
253 Broadway, 22nd floor, Box 72-A
New York, NY 10007
Phone: (212) 442-9968 Fax: (212) 442-9998
Website: www.ci.nyc.ny.us/health
- **FRANCIS J. CURRY NATIONAL TB CENTER**
3180 Eighteenth Street, Suite 101
San Francisco, CA 94110
Phone: (415) 502-4600 / Fax: (415) 502-4620
Website: www.nationaltbcenter.edu
- **CHARLES P. FELTON NATIONAL TB CENTER AT HARLEM HOSPITAL**
2238 Fifth Avenue, First Floor
New York, NY 10037
Phone: (212) 939-8254 / Fax: (212) 939-8259
Website: www.harlemtbcenter.org
- **NEW JERSEY MEDICAL SCHOOL NATIONAL TB CENTER**
65 Bergen Street, Suite GB-1
Newark, NJ 07107-3001
Phone: (973) 972-3270 / Fax: (973) 972-3268
Website: www.umdnj.edu/ntbc
- **CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)**
Division of Tuberculosis Elimination
Communications and Education Branch
1600 Clifton Road, N.E., Atlanta, GA 30333
Phone: (405) 639-8135 / Fax: (404) 639-8960
Website: www.cdc.gov/nchstp/dtbe.html
- **LIVE INTERACTIVE SATELLITE TELECONFERENCES**
State health departments, the Francis J. Curry National Tuberculosis Center, and the CDC periodically sponsor nation-wide or regional satellite teleconferences on relevant TB topics. Up to date comprehensive information about future broadcasts is available from the Public Health Training Network web site at <http://www.cdc.gov/phtn>.

APPENDIX L: Fast Track Evaluation Form

THE CHARLES P. FELTON NATIONAL TUBERCULOSIS CENTER AT HARLEM HOSPITAL

Name: _____

Date: _____

We would like to thank you for participating in the Fast Track program. We appreciate your assistance in answering the following questions.

1. Did you miss any of your scheduled clinic visits?

☐ Yes ☐ No _____ If no, go ☐ to question #3

2. If yes, why did you miss your appointments?

☐ Did not remember

☐ Did not have the time

☐ Still had medication left

☐ Could not get time-off work

☐ Other (specify)

3. Did you miss any doses/days of medication?

☐ Yes ☐ No

If no go to question #6

4. If yes, in a typical week, how many days did you miss? Number of days missed _____

5. In a typical month, how many weeks did you miss? Number of weeks missed _____

6. How many months of treatment did you take? Number of months _____

7. Did you have any side effects taking your medication? ☐ Yes ☐ No

Specify _____

8. Did you have any difficulties taking your medication? ☐ Yes ☐ No

Specify _____

9. Was the Fast Track program helpful in getting you to complete therapy?

☐ Yes ☐ No

If no, why not? _____

10. What did you find the most helpful?

- ☐ Educational materials
- ☐ Short wait time
- ☐ Program well organized
- ☐ Reminders
- ☐ Being able to make appointments at a convenient time and place
- ☐ Prompt availability of medication
- ☐ Other (specify) _____

11. What are other factors that helped you?

- ☐ Self motivation
- ☐ Family support
- ☐ Afraid of TB
- ☐ Concern for family/friends
- ☐ Other (specify) _____

12. What else could be done to make it easier for others to start and complete treatment for latent tuberculosis infection? _____

CHARLES P. FELTON
NATIONAL TUBERCULOSIS CENTER AT HARLEM HOSPITAL

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New York, NY 10037
Phone 212-939-8254 Fax 212-939-8259
Website www.harlemtbcenter.org